

Kesan Pengambilan Kopi Segera Berkafeina Terhadap Prestasi Larian Pecut 100m

(The Effect Of Instant Coffee Consumption Towards 100m Sprint Performance)

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Abstrak: Kopi merupakan sumber semula jadi kafeina yang boleh merangsang daya ketahanan dan kekuatan badan manusia. Namun, didapati tiada penelitian kesan ergogenik kopi segera terhadap prestasi larian pecut 100m. Maka, hubungan di antara pengambilan kopi segera terhadap masa yang diambil untuk menghabiskan larian 100m dikaji dengan mengadaptasikan konsep 1-repitasi-maksimum dalam 2 cubaan larian 100m. Sampel kajian seramai $n = 6$ orang atlet telah diberi sejenis minuman suplemen 30 minit sebelum larian pecut 5 hari berturut-turut diselangi 2 hari rehat selama 3 minggu. Turutan minuman adalah kopi segera decaf (DC), air (W) dan kopi segera berkafeina (C). Masa diambil pada jarak 60m (t_{60m}) dan 100m (t_{100m}). Bagi memastikan dapatan kebarangkalian teguh terhadap ralat jenis I, data t_{100m} yang tidak homogen diubahsuai menggunakan kaedah Nonparametric Levene's Test ($Diff_Rt_{100m}$). Berdasarkan analisis ANOVA satu hala, didapati ada perbezaan skor min yang signifikan untuk $Diff_Rt_{100m}$ ($F(2,87) = 5.583$, $p = .005$, $\eta^2 = .127$). Selanjutnya, analisis Post-hoc data $Diff_Rt_{100m}$ menunjukkan perbezaan signifikan di antara skor min DC dan C untuk masa larian 100m. Didapati tiada perbezaan signifikan untuk catatan masa pada 60m. Kesimpulannya, minuman kopi segera mempengaruhi prestasi larian 100m. Namun begitu, kajian lanjut harus dijalankan untuk mengenal pasti kesan ergogenik kafeina dalam bentuk kopi segera terhadap prestasi larian 100m.

Kata kunci: larian pecut 100m, kopi segera, kafeina, prestasi

Abstract: Coffee is a natural source of caffeine that can stimulate the endurance and power of the human body. However, there is no known research on the ergogenic effects of instant coffee towards the performance of 100m sprint. Therefore, the relationship between the consumption of instant coffee and the time taken to finish a 100m sprint is studied by adopting the 1-repetition-maximum concept for 2 100m sprint trials. A type of supplement drink is given to the samples of this study which are $n = 6$ athletes 30 minutes before the sprint, 5 days consecutively with 2 days of rest for 3 weeks. The order of the drinks is instant decaf coffee (DC), water (W), and instant caffeinated coffee (C). The time is recorded at 60m (t_{60m}) and at 100m (t_{100m}). To ensure that the statistics are robust against type I error, the non-homogenous t_{100m} data is modified with the Nonparametric Levene's Test method ($Diff_Rt_{100m}$). The ANOVA one-way analyses showed that there is a significant mean score difference for $Diff_Rt_{100m}$ ($F(2,87) = 5.583$, $p = .005$, $\eta^2 = .127$). Furthermore, the Post-hoc analyses from data $Diff_Rt_{100m}$ showed a significant mean score difference between DC and C for the 100m sprint. There is no significant difference for time recorded at 60m. In summary, the instant coffee drink can affect the performance of 100m sprint. It must be noted that further